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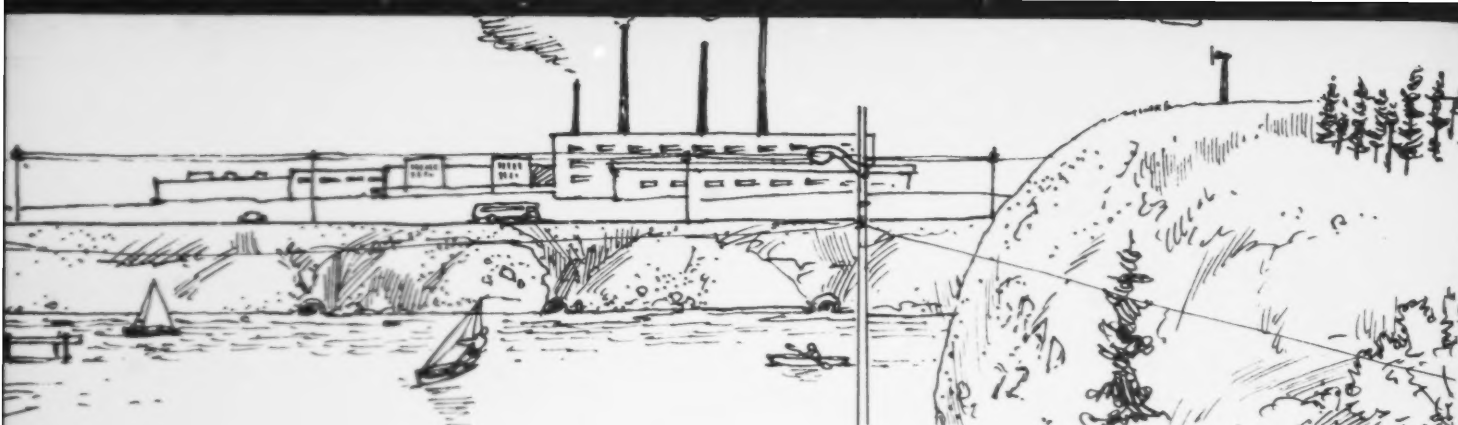
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ABSTRACT

This educational resource kit consists of five illustrated panels and the Teacher/Leader Guide. The five illustrations show a camp setting over a time sequence from the 1940s or 1950s through 1986. Each panel illustrates the speed and the causes of change, showing the addition of factories across the camp lake; alteration, razing, and building of camp facilities; addition of camp activity sites; alteration of the natural landscape; and other environmental changes. The Teacher/Leader Guide accompanying the panels identifies major themes and items to look for in each illustration under these headings: activities, ecology, economics, environment, facilities, human intervention, people, and technology. For each heading, the guide identifies major concepts and makes suggestions for learning activities. Learning activities relate the panel illustrations to changing concerns such as sex roles, handicapped campers, land use, community, appropriate clothing, recycling, erosion, safety, and ecological diversity. Activities suggested include making lists; writing essays, poems, letters, and stories; playing games; drawing pictures and postcards; singing songs; and inventing animal stories and conversations. The guide emphasizes the interrelation of all things, humans and the natural environment, culture and physical change. The guide also suggests additional themes for which learning activities could be developed using these panels. (DHP)

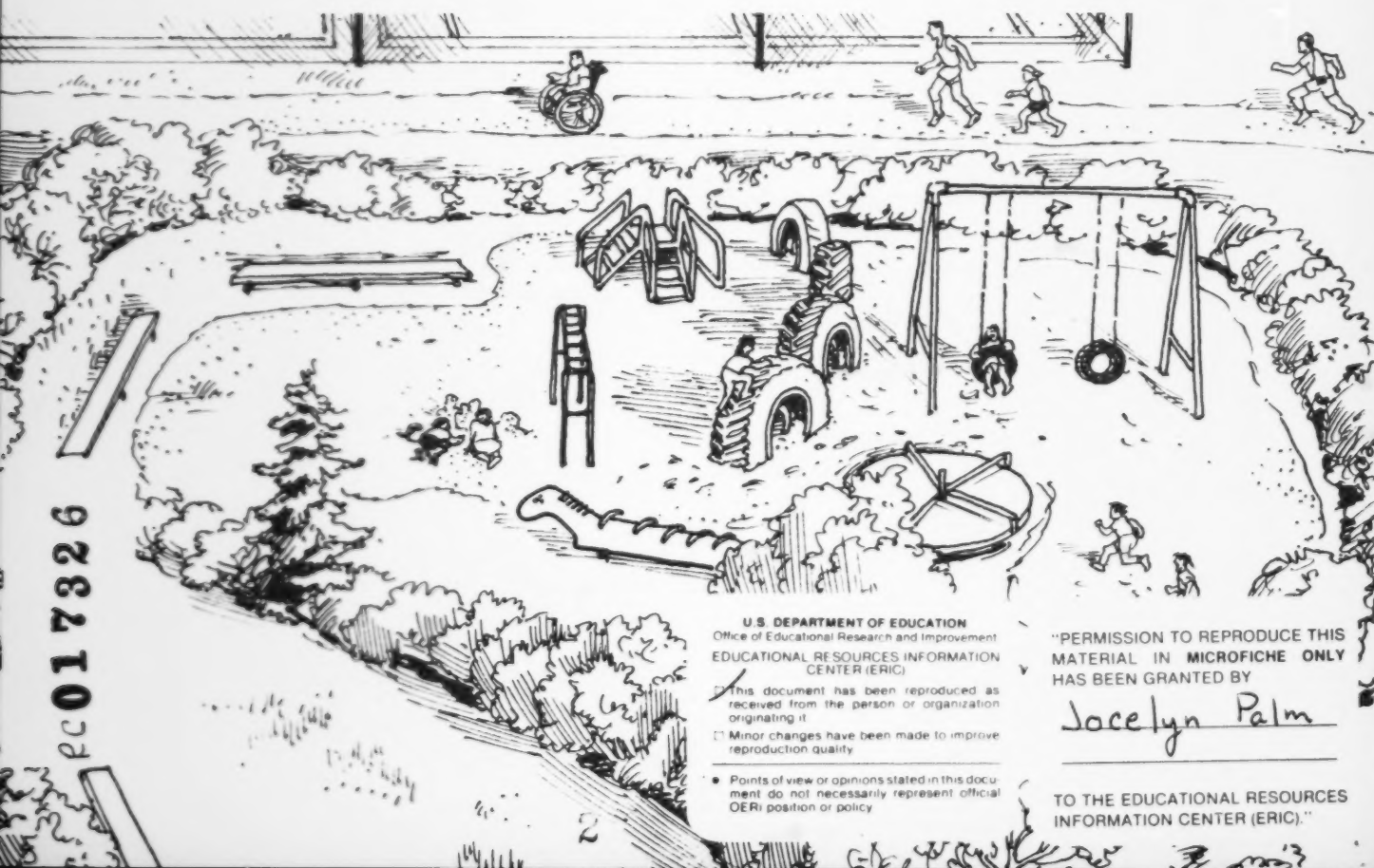
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EXPLORING ENVIRONMENTAL CHANGE

TEACHER/LEADER GUIDE



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EXPLORING ENVIRONMENTAL CHANGE

An environmental education kit



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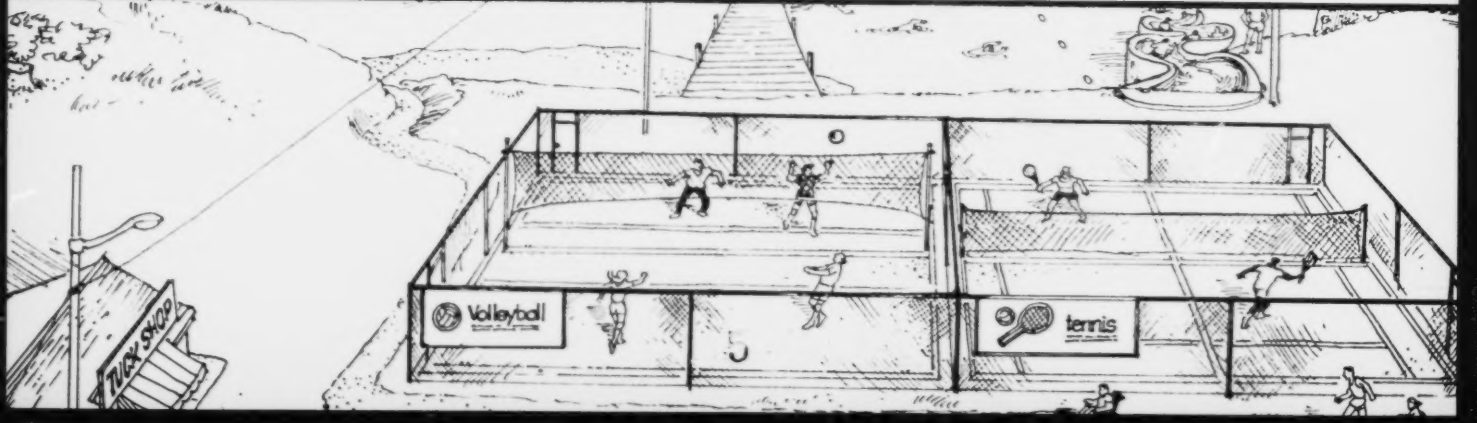
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EXPLORING ENVIRONMENTAL CHANGE

An environmental education kit

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EXPLORING ENVIRONMENTAL CHANGE

INTRODUCTION

EXPLORING ENVIRONMENTAL CHANGE is an educational resource kit of five illustrated panels and the Teacher/Leader Guide.

The five illustrations were developed as a teaching tool suitable for ages 12 to adult. These panels show a captured moment of time in a sequence that illustrates the rapidity and causes of change. The panels are coded A through E. Each panel is unique and autonomous. Collectively the panels offer a powerful learning opportunity that is much greater than the teaching/learning potential individually. As the learner moves from panel A through to panel E, the speed of change is greater because the time span between panels is shorter. We begin with an illustration A in the 1940's or 1950's, then go to B in the 1960's, C in the 1970's, D in 1980 and finally panel E in 1986.

At the request of the teachers and leaders who provided helpful comments as this project progressed, this Teacher/Leader Guide was written to introduce the teaching/learning potential of the panels. The major themes are identified and the items to look for in the respective illustration. For each theme, major concepts are identified and some suggestions for learning activities are included for each theme. The potential for additional learning ideas is considerable. Observational skill can be employed to seek

information about a single subject, eg. an owl, or multiple interrelationships such as the human impact on the environment. In fact, as the ideas were being developed for this *Teacher/Leader Guide*, more and more ideas occurred to us. Do let your imagination soar as you become familiar with the panels and as you become more at ease with their use.

If the Teacher/Leader encourages skilled observation through the use of specific skills of enquiry, learners should develop insights into various disciplines.

Concept development is encouraged through provoking learning activities.

The development of understanding is encouraged by acquiring knowledge and through having the opportunity to experience the emotional aspects of facts and enquiry.

Interdependence is illustrated in diverse ways in each panel. Collectively the panels graphically present interrelationships and their effect over time.

Teachers/Leaders will be mindful of the abilities of the learners as learning activities are prepared. There is material for simple 'fact' learning and clues for the various abilities of a *detective*.

Date: 1940's - 1950's
Season: Late Spring
Time of Day: Early morning

1

ACTIVITIES

chores - *dish washing, chopping wood, starting fires, hauling wash water*
little choice in activities
male and female stereotypes
girls: *Bible study, crafts (nature crafts); girls are sitting or dish washing*
boys: *active hiking and sports activities eg. baseball, horseshoes, basketball, kite flying*
large groups
musical instruments - *mouth organ*
group activities as opposed to individual
water activities - *swimming, inner tube; male lifeguard present*

2

ECOLOGY

plant succession - *open pond, marsh (stage 1)*
note young trees
fauna - *beaver lodge, rabbit, squirrel*
- sparrows, robin, ducks, pheasant, red-winged blackbird
- migration north
trees - *maple, birch, spruce, pine*
composting pile

3

ECONOMICS

program items - *inner tubes*
tuck shop sign - *note camp fees \$5.*
camp clothes - *similar, dull colours, skirts for girls, one or two in pants*

4

ENVIRONMENT

note natural look of the environment - *relatively untouched by humans*
stream, lake, grassland, forest
farm is elementary - *wind shelters rather than buildings*
farm - *grain and cattle - mixed*
geographical features, streams, grassland and
cliff are in a very healthy appearing state, little evidence of erosion

5

FACILITIES

signs - *there are 3, primitive style, using words*
fences - *none*
clothes drying - *clothes line*
courts - *basketball - bare ground with hoop fixed to a tree*
softball - on open grass with clothing as bases

6

HUMAN INTERVENTION

farming which disturbs the land is evident
trails
items tied to trees eg. clothesline, basketball hoop
no evidence of pollution of air, water or noise

1

ACTIVITIES

swim lessons
canoe-sailing, canoeing, inner tubes
group activities, - *basketball, volleyball, baseball, horseshoes; note*
- *horseshoes is only co-ed activity*
girls are more active than in A- playing volleyball
musical instruments - *leaders only, playing guitars*
boys most physically active

2

ECOLOGY

plant succession - *marsh plants (stage 2)*
- *young trees with underbrush*
fauna - *beaver lodge*
- *fish leaping*
- *coyote*
- *birds - Canada goose*
- *owl, hawk, peregrine falcon*
- *camouflage - rabbits, colour in relation to the scene*
- *insect pests - effects, spruce budworm on trees - loss of green*
- *homes - tracks, lodge of beaver, nests*
impact - *animal and human trails*
- *polluting industry stack nearby*

3

ECONOMICS

program items - *inner tubes*
tuck shop - *T shirts, candies and price list, camp fees \$30, camp*
notepaper
camp clothes - *pants, some jeans, some colours*

4

ENVIRONMENT

environmental impact becoming evident
- *loss of forest environment by comparison to A, C, D & E panels*
- *more roads, some lumbering - see trucks on roadway*
- *signs of beginning to pollute the environment, e.g. management*
of waste, air pollution - stacks
- *surface damage to land in games area*
land still in healthy state - *damage is small and*
limited (cumulative effects of impact are
reasonable)
one or two water erosion areas - *see cliff and*
stream also note lake level dropping
farms - *specialization is evident - grain only*

5

FACILITIES

signs - *in words*
increase in size and number of signs
primitive materials and construction
cabins have animal names
fences - *wood and barbed wire*
clothes drying - *line around cabins and central area*
courts - *basketball hoop on tree*
baseball diamond on grass
volleyball court lines out on ground
cabins - *centralized groupings of cabins*

6

HUMAN
INTERVENTION

fences
paths and trails
air pollution
courts - *volleyball, basketball*

7

PEOPLE

LEADERS

maintenance - *male*
nurse - *female in uniform and cap, handing out pills, serious expression*
cook - *female*
counsellors - *wearing shorts, shirts and whistles*

CLIENTELE

campers - *10-16 years of age*
stereotyped male and female roles
disabilities - *one camper in a wheelchair, two campers on crutches, thalidomide camper, one camper with a hearing aid, campers using sign language are all in one cabin*
clothing - *female - slacks and shirts, white ankle socks*
 - *male - peg leg jeans, T shirts*
hair - *female - long and free flowing, some with short hair*
 - *male - slicked back short hair*
hats - *baseball type*
footwear - *white runners and oxford shoes*

8

TECHNOLOGY

water sources - *all subterranean water*
stoves - *large wood fires*
sleeping bags - *large kakhi sleeping bags*
lighting - *gas lantern by outhouse*
axes and double handled saw
tents - *short wall type*
materials and colours of equipment
 - *similar equipment, some variation in colours*
size of gear - *mostly adult*
program equipment - *binoculars*
books - *leader has an identification book*
 - *children reading*
telephone - *black wall dial type*
transportation - *one small bus, one car and a truck*
propulsion - *3 canoes, wind for sailboat*
food drying - *note that the smoke house burned down*
garbage - *still burn and bury cans*

Date: 1970's
Season: Fall
Time of Day: Early Afternoon

1

ACTIVITIES

swim class
sailing, canoeing, scuba
commercial handicrafts
games in groups, pairs and for individuals
volleyball, badminton, tennis, tetherball
more diversity of activities
adventure outtrips
musical instruments: *lots played by campers & staff*
ropes course
minimum impact camping

2

ECOLOGY

plant succession - *grasses and woody shrubs (stage 3)*
- *young trees*
- *burned over area at point*
fauna - *deer, squirrel*
- *beaver lodge*
- *rabbit*
birds - *fall migration*
- *owl with prey*
camouflage very evident in some animals.
e.g. rabbit with white patches
composting
lots of colour
signs of autumn evidenced by fallen leaves
food supply in berries

3

ECONOMICS

program items - *long wet suit and scuba gear*
camp clothes - *colours, jeans, T shirts*

4

ENVIRONMENT

environmental impact reaching its peak
note pollution of land, water and air through poor management of
waste and excess demand for services
land erosion is evident, see stream and cliff
farm - *has become monoculture, larger farms with bigger equipment*
wild areas of environment still in evidence

5

FACILITIES

signs - *some words, some pictures*
- *lots of signs and of better quality*
fences - *wood and barbed wire*
clothes drying - *clothesline in one area of camp*
courts - *volleyball court, badminton court*
- *baseball diamond and backstop, tetherball*
cabins - *winterized lodge*
- *one cabin*

6

HUMAN
INTERVENTION

profit versus preservation in site development
fire
lumbering
new buildings
pollution; sulphureous skies

7

PEOPLE

LEADERS

maintenance - *male, older*
nurse - *regular clothes, female, checking kitchen*
counsellors - *co-ed activity groups; fewer clipboards; person directing swimming, some counsellors playing with campers*

CLIENTELE

clothes - *female - shorts or cutoffs and T shirt*
 - *male - jeans and T shirts*
hair style - *male - longer hair*
 - *female - long and short styles*
hats - *cloth caps*
footwear - *runners*

8

TECHNOLOGY

lighting - *electricity has come to camp - one street light, lantern still at outhouse*
water sources - *drinking fountain*
stoves - *Coleman*
sleeping bags - *down variety, dark colours*
energy - *large solar panels*
 - *wind generator*
axes and saws - *power saw, light weight axe, camp saw*
tent - *A frame tents*
materials and colour of equipment - *each has his/her own equipment, some very bright colours*
size of gear - *children's sizes of gear appearing*
cups and plates - *aluminium and plastic*
program equipment - *archery, binoculars, badminton racquets, musical instruments and baseball*
radio and TV - *note TV and antenna*
transportation - *station wagon, few cars, longer truck*
pollution - *sulphureous sky, small jet stream from plane*
propulsion - *canoes and power boat*
garbage - *sorted and composted*

1

ACTIVITIES

minimum impact camping
start of snow caves
toboggan, ice sailing
lots of diversity
males and females do everything; ie. no stereotyping evident

2

ECOLOGY

plant succession - *willows, low shrubs (stage 4)*
- *young forest of small spruce starting to grow under canopy*
fauna - *lots of tracks of animal life*
- *beaver trail, coyote trail, rabbit track (running)*
- *winter residents*
- *chickadee, snowy owl, sparrow, etc.*
- *coyote, rabbit*
- *camouflage of animals evident*
- *adaptation of animals to winter*
- *thick fur, fluffed up feathers, etc.*

3

ECONOMICS

program items - *ice sailing*
bob sled run sign
toboggan
skiis and snowshoes
tuck shop - *camp items; eg. track suits, variety of camp mementoes, candy and price list*
- *separate board advertising camp fees \$150-250*

4

ENVIRONMENT

evidence of a forest fire
loss of environment to; buildings, docks, roads and playing areas
some water erosion, see cliff
pollution of air - *wastes evident in smoke stacks*

5

FACILITIES

signs - *bilingual pictures are quality contruction, wood, paint*
fences - *pipe and steel cable*
cabins - *moving to decentralized groupings - some old cabins and central winterized lodge*

6

HUMAN INTERVENTION

air pollution - *suphureous sky*
tree lot on field and one in burned over area
water erosion seen on cliff face
more area cleared for buildings

7

PEOPLE

LEADERS

maintenance - *male working with a second male*
 medical person - *regular clothes, male, doing nutrition lecture*
 cook - *one male, one female*
 counsellors - *with campers, co-ed activity groups*
 - *disabled counsellor on crutches*

CLIENTELE

family camp
 disabilities - *attempts to integrate physically disabled, amputees on crutches*
 clothing - *female - cross country ski outfits*
 - *male - ski suits*
 footwear - *specialized for each activity*

8

TECHNOLOGY

water sources - *taps and fountains at every program site*
 sleeping bags - *small, bright colours, one ensolite pad*
 lighting - *street and path lights; lights at program areas*
 energy - *photovoltaic cells*
 wind generators - see change in windmill shape
 axes and saws - *chain saw, only one axe evident*
 tents - *mountain tube tents*
 materials and colours of equipment - *every one has own equipment,*
 great variety of colour
 size of gear - *children's sizes*
 telephone - *push button phones - short public phone booth (yellow)*
 snow blower
 radio and TV - *both evident, also Walkman and dish*
 transportation - *large highway buses and individual cars*
 propulsion - *wind for ice sailing*
 garbage - *probably trucked out as no system evident to deal with*
 garbage on the site

Date: Early 1986
Season: Summer
Time of Day: Late Afternoon

1

ACTIVITIES

ropes course, aerobics, "triathlon" - swim, canoe, run
minimum impact/high tech outtripping with specialized gear
musical instruments - *Walkmans and ghetto blasters*
tennis, volleyball and badminton courts
no organized swim lessons
canoes, sailboats, boardsailing
lots of diversity in activities
males and females of *all* ages doing everything

2

ECOLOGY

plant succession - *deciduous trees (stage 5)*
- *mature forest in early stage*
birds feeding - *sparrows, woodpecker, robin, blue jay, owl, hawk,*
red winged blackbird
Halley's comet

3

ECONOMICS

program items - *moulded plastic water slide, jet boat, water skiing,*
short wet suits, canoe and kayak
clothes - *designer wear*

4

ENVIRONMENT

forests - *signs of lumbering are evident in trucks on road*
development of large cottage at far end of lake
landscaped areas

5

FACILITIES

signs - *large picture signs*
quality constructed and carved
fences - *deteriorated pipe and steel cable*
courts - *formal tennis, badminton and volleyball courts*
cabins - *central winterized lodge*
centralized cabins - sleeping quarters have been replaced
with new cabins

6

HUMAN INTERVENTION

loss of land to development
loss of agricultural land
lumber industry evident
signs of environmental pleading; ie. an attempt to resolve;
note transplanting of trees at site of fire in C and D panels
tree lot has been added to develop young trees
path surfaces have been altered to protect the earth
sulphureous sky as a result of stacks

EXPLORING ENVIRONMENTAL CHANGE

E

7

PEOPLE

LEADERS

maintenance person - *second male maintenance person as in 80's*
medical person - *male, regular clothes*
counsellors - *one in a wheelchair, counsellors are joining in with the campers rather than standing aloof*

CLIENTELE

disabilities - campers in wheelchairs
clothes - *male - camouflage*
 - *female - same as D panel*
hair - *show "punk" and individual variety in length*
stuffed toys
footwear - *specialized for each activity*
sunglasses - *narrow and wraparounds*

8

TECHNOLOGY

water sources - *small water fountains*
small wood fires
sleeping bags - *small bright colour sleeping bags*
lighting - *streetlights and lighting in program areas*
energy - *solar type photovoltaic cells*
 - *wind type generators*
saws - *chain saw, wood cut neatly and piled*
tents - *dome style*
materials and colours of equipment
 - *camouflage type and bright colours*
 - *everyone dressed differently*
size of gear - *now matches size of person*
program equipment - *telescope*
telephone - *futuristic type booth, bright colour*
radio and TV - *earphone Walkmans, smaller ghetto blasters,*
 colour T.V., dish
transportation - *bus and modern cars*
garbage - *removed in bins by a commercial firm*

8 THEMES have been identified. Each theme has several major concepts which are listed under the theme. There are some suggestions for learning activities based on each of the themes. The activities selected by the Teacher/Leader will be tailored to: the age of the learners; the abilities and backgrounds of learners; the setting and the objective(s) of the session.

The learning activities might be based upon:

identification	prediction
classification	inference
relationship	contrasting
perception	drawing
reaction	graphing
planning	comparison
verbalizing	writing
decision making	representations
evaluating	fact gathering
etc.	

Student **ACTIVITY SHEETS** which can be duplicated by the Teacher/Leader for each learner are included with some themes.

ACTIVITIES THEME

1



A diverse menu of recreational and educational activities, some environmentally consumptive, continue to be enjoyed by campers and staff. The activity offerings change significantly over time.

MAJOR CONCEPTS

1. Historically campers had few activities from which to choose; today, a wide variety of program activities are available.

2. Historically facilities were rustic and a minimum of program equipment was available. Today, a diversity of types and improved quality of equipment is available year-round for campers of all ages and abilities.

3. The focus of recreational activities has changed from leader-organized and led to challenge and adventure focussed programs which seek to develop the leadership potential of all participants.

4. Programs vary in their focus from encouraging participation in activities to acquiring high levels of skill and knowledge.

5. Historically, males and females participated in segregated and often stereotyped activities. Today, males and females equally participate in the total array of recreational activities.

6. Campers traditionally participated in all aspects of camp life including chores and maintenance activities. Today, volunteers and staff tend to perform more of these functions.

7. There has been a change in the ratio of participants to leaders throughout the history of recreation.





SUGGESTIONS FOR LEARNING ACTIVITIES

1. List the games shown in each picture.
Place a check beside each game you have played.
Beside each game you have played, write where you learned to play that game.
2. What NEW activities and games might a person learn at this camp if he/she was growing up in a rural area?
OR
What new activities does a camp like this offer to people who are growing up in a large city?
3. How do the activities shown take best advantage of the site at which they are played?
4. What activity, or types of activities would you have developed on the site?
5. What effect does the climate have on the participants in the pictures?
Consider: clothing
activities
shelter
health
6. Describe in a few words for each panel, the games played by boys and by girls and by both together.
7. Contrast from panel to panel the amount of physical activity enjoyed by campers at that time. Do the campers in panel E seem any more fit than the campers in panel C or panel D?
8. Write a letter to a friend at home describing the games you play at camp. You are at the camp at the time of panel 'x'.
9. Write a short story about the games you think will be played at Camp Perspective in 1990. ■

ECOLOGY THEME 2



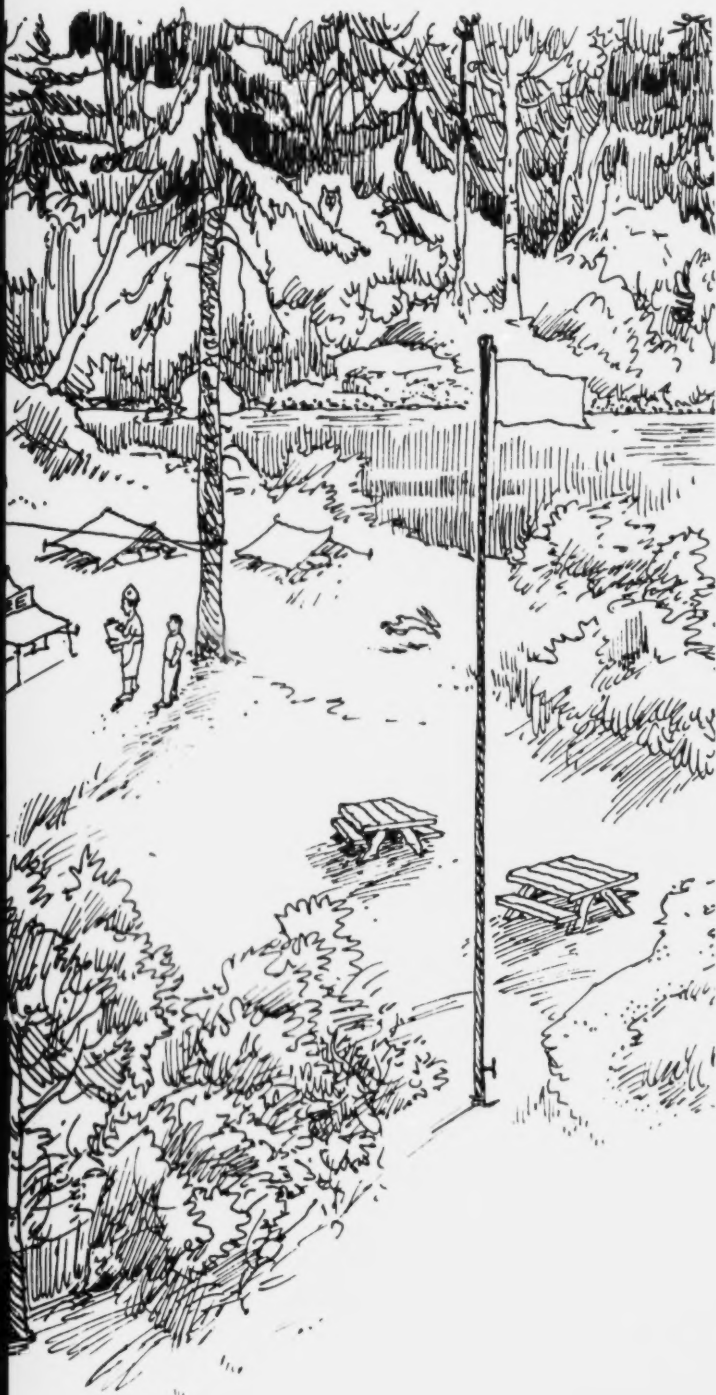
An understanding of the interdependence between earth's living (biotic) and non-living (abiotic) systems, and specifically the ecosystems of a campsite are essential to an understanding of the management and development of a recreational setting.

MAJOR CONCEPTS

1. All living things must adapt, or adjust to their environment, alter their environment, or perish.
2. All organisms and abiotic components of the environment are undergoing change.
3. All organisms are interdependent with other organisms and their environment.
4. Diversity (differences) in organisms enables life to survive all over the earth.
5. Succession is the gradual and continuous replacement of one kind of plant or animal community by another and is characterized by a gradual change in the species composition.

SUGGESTIONS FOR LEARNING ACTIVITIES

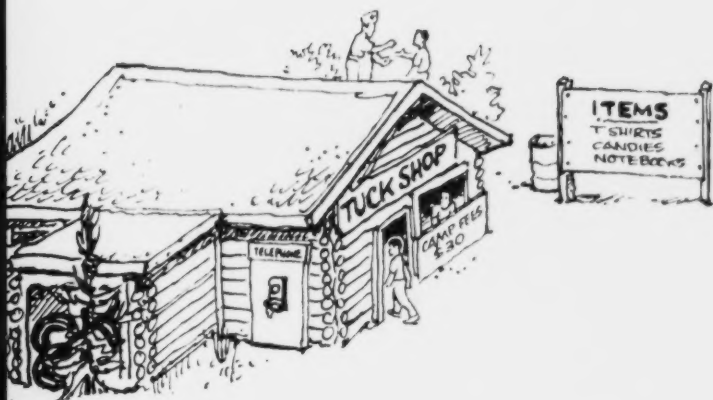
1. List for each panel the seasonal changes which occur in the:
 - vegetation
 - animals
 - birds
2. Identify the changes occurring in the marsh from panel A through E. Name the different plant species and give the cause of the changes in the water level over time.



3. This camp is an owl's habitat.
Where does the owl live?
What does the owl eat?
Who are the owl's enemies?
How does the owl protect itself from its enemies?
4. Draw a diagram of a food chain. Begin with a plant and move from producer to consumer to higher order consumer to decomposer. Find several examples of food chains illustrated in the panels.
5. List the natural plant species found in the panel(s).
List the introduced plant species found in the panel(s).
Compare the needs of the natural plant species and the introduced plant species.
6. Less of one thing in the environment usually means more of another. Identify and list the specimens that are decreasing and others that are increasing.
Discuss the relationship between your two lists.
7. Draw a picture which is an extension to the left or right of any one of the panels. Your picture should include plant and animal species that you would expect to find in a adjacent setting to the one shown.
8. Write a conversation between a rabbit and a squirrel in panel A or C in which they discuss their needs for food and the availability of the items they need in order to survive. ■

ECONOMICS THEME

3



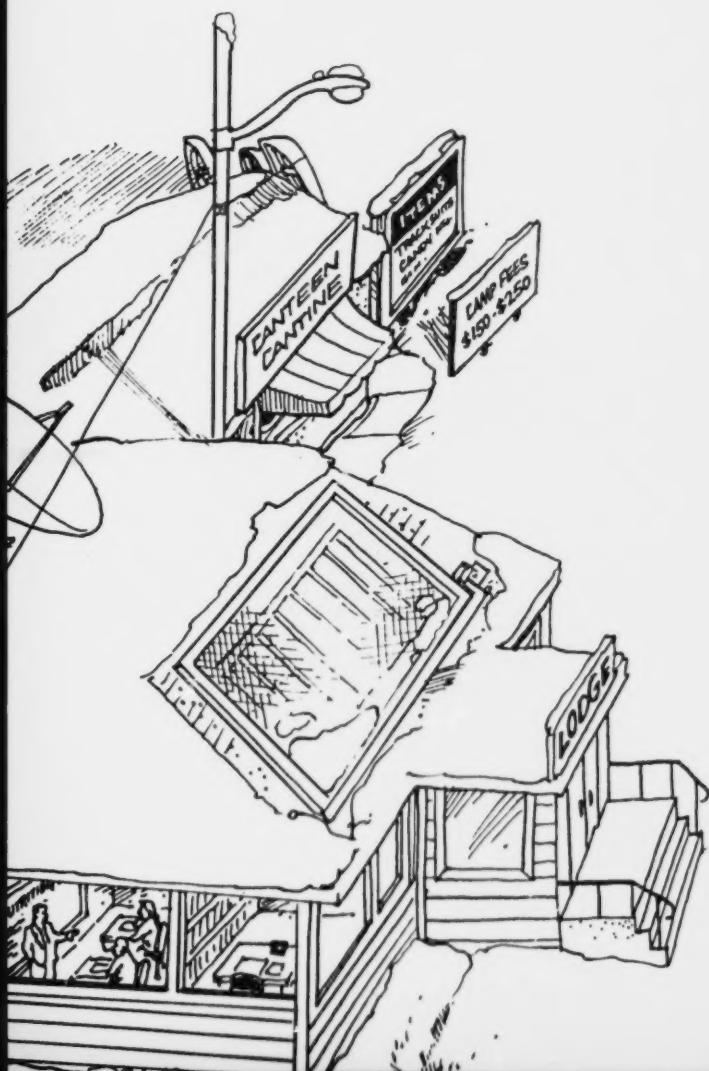
The development of the camp site is the result of management choices made by the owner. The owner must seek to meet the needs and demands of customers (clientele) and balance these with income and expenditures. The owner must be mindful of trends in leisure and recreation in order to plan for the facilities and leadership which will be required.

MAJOR CONCEPTS

1. The costs of goods and services have increased over time.
2. The quantity and quality of equipment used by the participants has changed over time.
3. Individual expression in the fashion preferences of children is a recent phenomenon.
4. Consumers buy educational and recreational experiences.
5. The variety of goods and services offered at the camp have multiplied.
6. The costs of operation of an outdoor recreation facility are significantly increased where the climate varies to extremes from season to season.

SUGGESTIONS FOR LEARNING ACTIVITIES

1. List the items offered for sale to the participants in each panel from A to E.
2. List all the items that a camp fee buys.
3. Is there any real difference in what the camp fee buys in winter (panel D) as compared with summer (panel E)?
4. If you were the owner of the camp, would you charge different fees in different seasons? Explain your choice.
5. Identify the services the camp fee includes

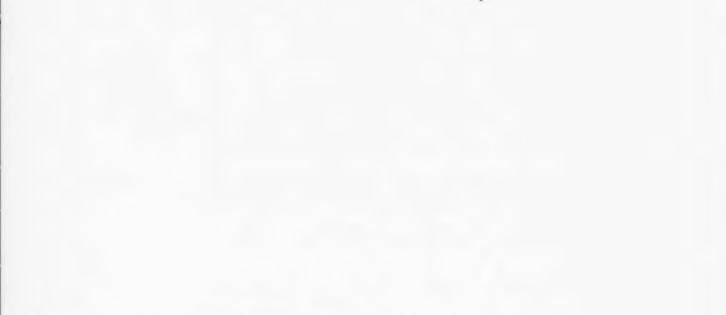




6. Compare and contrast the equipment used by the participants in selected panels. Consider type of equipment, quantity of items, individual versus group equipment, etc.
7. Draw a picture of two (or more) participants in each panel in order to illustrate the changes in clothing worn by participants from panel to panel.
8. Prepare a chart which compares the clothing and accessories of campers. The headings for your chart should be: types of clothing; colours; fashion features; presence or absence of accessories; types of accessories; function(s).
9. What factors have influenced the change in camp fees over time?
10. What is the economic situation of this geographic area? Consider the farm as well as the townsite. What has caused the difference from panel A to E?
11. Identify the changes that have occurred in agriculture over time.
12. How have the inhabitants of this geographic region made their livelihood during the time period of the panels?
List their job titles.
13. On a two column sheet, list the differences between the camp setting and the urban setting in terms of economics.
14. What trends in economic development do you anticipate for the future of this region?
15. With a partner, prepare and act out a dialogue in which one takes the role of a camper in panel D or E and the other the role of a camper in panel A, B or C. Your discussion should be entertaining and one which comments of the goods and services available at the camp.
16. Write a chapter as the Camp Perspective Historian in which you summarize the significant expenditures over any decade illustrated in the panels. ■

ENVIRONMENT THEME

4



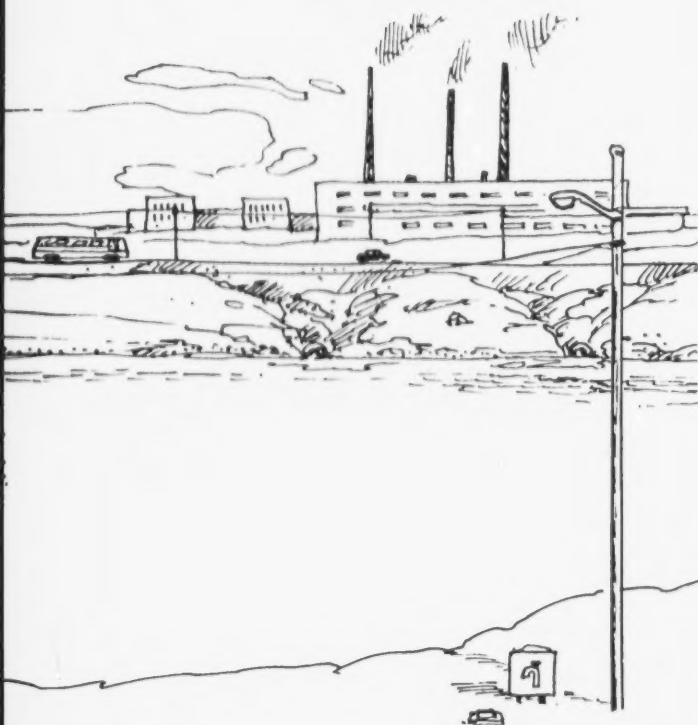
Daily, seasonally and over time, the plants, animals and people located in a geographic area interact with each other. Individual specimens and communities are affected by the presence or absence of each other, but are especially influenced by human actions.

MAJOR CONCEPTS

1. All organisms, including humans, have similar basic needs.
2. Communities, each with their characteristic organisms, exist in an ecosystem. Communities provide habitat for their organisms.
3. Each species occupies a niche (role) in the community in which it is found.
4. All organisms, including humans, interact with other organisms.
5. The environment is undergoing constant physical change at varying rates of speed.
6. There are limiting factors in the environment which restrict population growth.
7. Carrying capacity is the limited size of a population that any environment can support in any given period of time.

SUGGESTIONS FOR LEARNING ACTIVITIES

1. Define the term 'community'. Does the definition change as you look at the camp community, animal community and plant community in the panels?
2. What land sculpting processes have had an effect on the environment? Look for evidence of these factors from panel to panel. How have these processes changed the shape of the land?
3. List the similarities and differences between the dry land and wetland environments.
4. What is the impact of climate on the organisms in this geographic area?
5. Examine panel A. How might you have developed the site? Would you do things



differently from what is illustrated? Would any of your decisions be based upon a desire to use the environment more wisely than the present owner?

6. Examine panel E. What recommendations would you make in order to use this environment most wisely?
7. How has the primary industry of the area been affected by secondary industry?
8. You are an environmental scientist. What advice will you give to the owners in order to protect this setting?
Make your recommendations in the form of a report which includes: background, the current findings, recommendations, conclusion.

9. CASE STUDY

You are the owner of Camp Perspective. You have just received a letter from the Town Council, signed by the Mayor, which includes an offer to purchase your camp in order to provide space for industrial development. The offer is very reasonable. You must make a decision within 3 weeks as your camp promotional material must be mailed within that period.

A) Prepare to take the pro or con position in a debate in which it is resolved that industrial development is more important to the future of the community than the outdoor recreational opportunities offered by the Camp.

B) Write a letter as a parent of a camper to the Mayor in which you express your views on the benefits of keeping the Camp as a recreational setting.

C) Write a 10 minute speech on behalf of the Town Council encouraging acceptance of the industrial development.

D) With a partner, prepare a cassette tape of an interview with the press. Take the part of either a camper or the reporter.

E) A member of the Town Council has a son attending the Camp. Dramatize the parent's conversation with the local grocer early in the day prior to a visit to the camp and expounding the benefits of the proposed industrial development. Dramatize a second conversation after the parent has visited and been influenced by the son's enthusiasm for the Camp.

STUDENT ACTIVITY SHEET: EXPLORING ENVIRONMENTAL CHANGE

NAME _____

Instructions: List the changes from picture A to E in the appearance of the stream and surrounding banks.

A

B

C

D

E

STUDENT ACTIVITY SHEET: EXPLORING ENVIRONMENTAL CHANGE

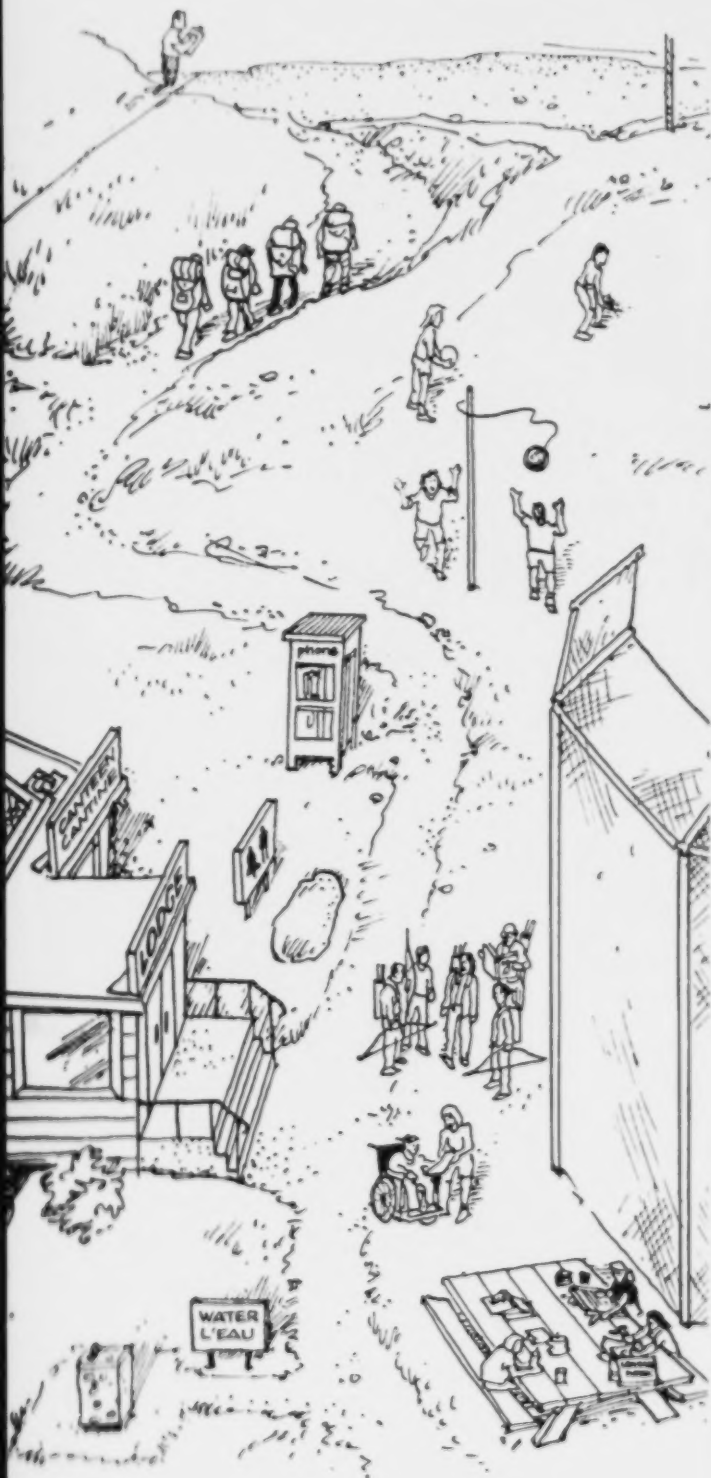
NAME _____

This picture is part of Panel A. Colour this picture to be October instead of June.



FACILITIES THEME

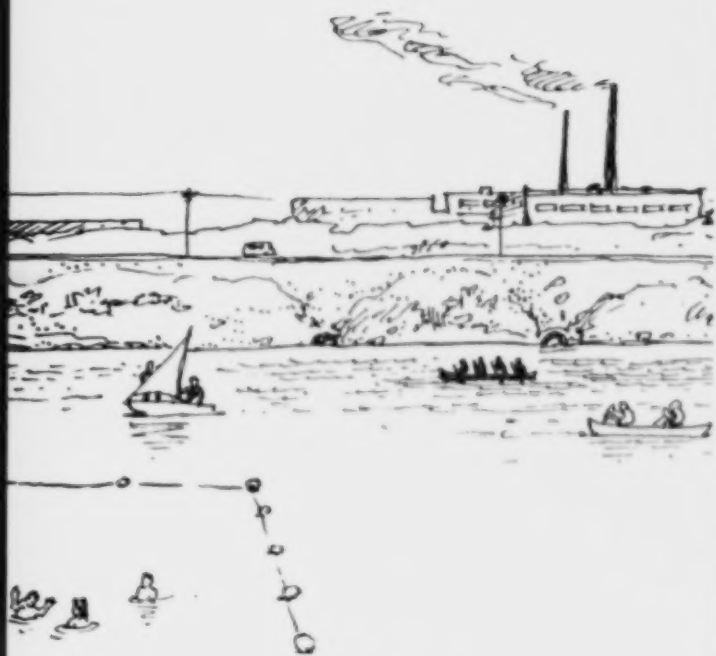
5



The type, quality and variety of facilities illustrated in these panels have changed dramatically over time. Requests and/or demands for facility changes have been initiated by the owner, staff, government regulations, consumer preferences, outside expertise contracted by the owner, etc.

MAJOR CONCEPTS

1. Facilities were initially rustic but today are architecturally unique and furnished with state-of-the-art fixtures, furnishings and equipment.
2. The construction materials for signs, buildings and facilities have changed from natural hand hewn raw materials to technology based, quality materials.
3. Some facilities were designed for seasonal (camp) use while others were designed for year round use (industrial site across lake, farm). Increasingly, year round facilities are designed.
4. Sleeping accommodations have changed from primitive structures that held very few, to centralized grouping of structures to modern facilities both permanent and portable.
5. Sports facilities have developed from generalized play areas to technically accurate locations for seasonal sports. The equipment and facilities have changed from simple, novice-created devices and areas to commercially developed items and sites.
6. Facilities and site developments are increasingly accessible to a wider variety of abilities and disabilities.
7. Camp signage has changed from a few small signs to an increasing number of larger signs. The message conveyed by signs has changed in communication format.
8. Fencing encloses and defines an area. The need for defining areas and materials used in the construction have changed over time.



SUGGESTIONS FOR LEARNING ACTIVITIES

1. Make a list of the similarities between your home community and that of the recreational development in the panels. Make a list of the differences between the recreational facilities in your community and those pictured in panel E.
2. List the construction materials used in panel A and panel E. What construction materials are available at your local building materials store that are NOT shown in panel E?
3. Write an advertisement for natural building materials in which you emphasize the advantages of such materials. Consider cost, durability, labour, weight, sizes available, minimum order, colour choices, etc.
4. Examine the 5 panels concentrating on the fixtures, furnishings and equipment in each panel. List the significant changes in each panel and indicate beside each whether the change was; necessary, desirable or unnecessary.
5. On a two column vertical sheet of paper list: a) physical activities that are played by universal rules, and b) physical activities in which you could be the rule maker. Which activities do you prefer and why?
6. What activities are not in one of the pictures but would be appropriate at that time. Draw a picture that could be added to a panel to include your choices for additional activities.
7. Draw a post card to illustrate your favourite recreational activity which is illustrated in one of the panels. On the back write to a friend to explain your illustration on the post card.
8. Design your own suggestions for signs that are, or could be included in panel E.
9. If you were going to place first aid kits in key areas in this setting, where should these be located and why?
10. At what places in this setting would you place fire extinguishers?
11. Imagine an emergency situation in which someone in this setting is seriously injured. List the steps involved in dealing with the emergency you have created.

STUDENT ACTIVITY SHEET: EXPLORING ENVIRONMENTAL CHANGE

PANEL _____

NAME _____

Instructions: For the panel you have chosen, draw something that is not in the picture but would have been appropriate at that time.

GAME

BUILDING

EQUIPMENT

SIGN

SPORT

WILDLIFE

STUDENT ACTIVITY SHEET: EXPLORING ENVIRONMENTAL CHANGE

NAME _____

CAMP PERSPECTIVE OBJECTIVES

A

B

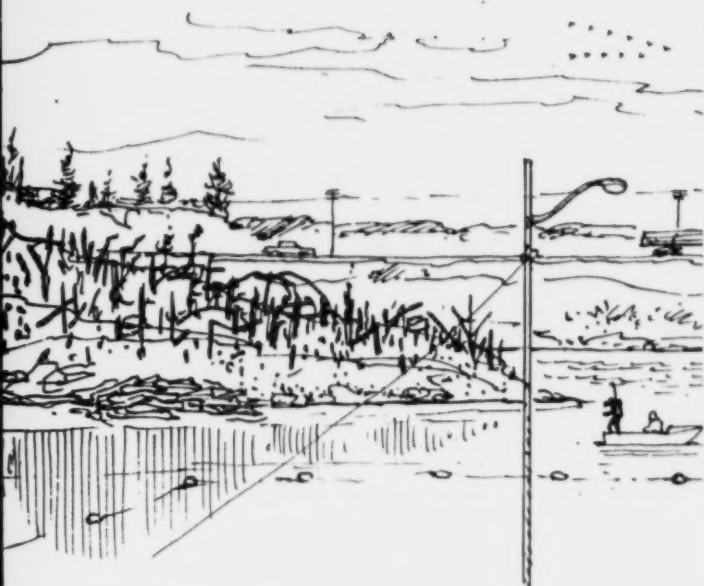
C

D

E

HUMAN INTERVENTION THEME

6



"Everything is connected to everything else" is a statement which refers to the potential for impact that each human intrusion has for the planet earth. By actively creating an awareness and an understanding of the interrelationships between humans and the natural environment, it is possible to promote and ensure the responsible use and stewardship of the environment and its natural resources.

MAJOR CONCEPTS

1. Each person as an individual and collectively as a member of society affects the environment.
2. Each person as an individual owner, manager or user is accountable for the actions he/she encourages which impact on the environment.
3. Human actions increasingly determine the future preservation, conservation, or destruction of natural communities.
4. Many groups with diverse interests are involved in managing parcels of land. All users impact each other and the natural environment.
5. Human intrusions and the degree of their impacts change over time. Human decisions made in the past influence the current availability, use options and productivity of the land.

SUGGESTIONS FOR LEARNING ACTIVITIES

1. Make a list of the examples of elements or items being recycled in these drawings.
2. Regeneration is cyclical. Identify as many areas as you can which are areas of regeneration.
3. Identify examples of wind erosion and water erosion. If you were the owner of this Camp, what could you do to lessen the impact of the erosion?
4. Choose 3 distinct land areas in panel A and list these down the left hand side of your page. In the next column, list the uses of the areas selected. Make 4 columns towards the right side of your page headed panel B, C, D,



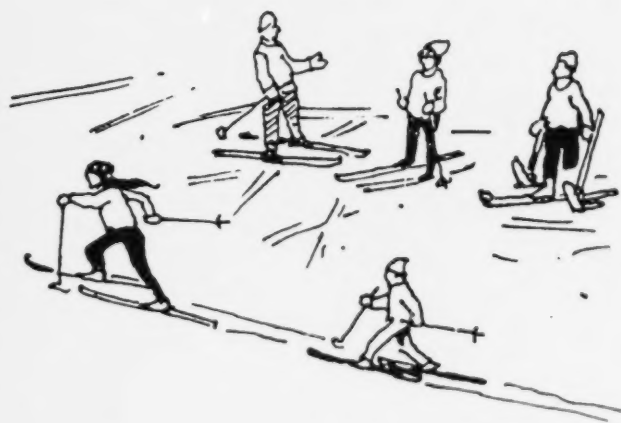
E and insert for each area the changes in the use of the land in each case.

5. Put yourself in the role of the owner of Camp Perspective as pictured in panel A. Lead a group discussion in which the members of the group play the roles of staff members at the Camp. The group is to prepare objectives for Camp Perspective.

Once the list of objectives is acceptable to the group, appoint a new owner from the group and look at panel B. Review the objectives. Will the group want to add any new objectives or delete any? Continue to switch owners as you move from panel to panel. When you have the objectives for panel E, compare the total list to determine what objectives are the same, which objectives change and why they change.

6. Choose any one panel. Describe what you would do to retain any area in the illustration exactly as it is for the next 10 year period.
7. What methods are used to minimize soil compaction on the trails in a recreational area? List those methods that are evident in the panels.
8. Write a story about the people who live in the building in panel E.
9. Write camp song that you think the campers in panel C or D would enjoy singing.
10. Fences often change the routes we travel. Prepare a 5 minute speech on this subject selecting your examples from any panel.
11. Take the perspective that you are a 10 year old wise fish who in 1986 is telling the other fish how the lake conditions are changing. What will you tell the younger fish about the impact of humans on the lake's condition? ■

PEOPLE THEME 7



The educational and recreational opportunities offered to children from various racial backgrounds and from various ability levels has changed with time. The consumer (participant) has more influence in the market place (camp) over time.

MAJOR CONCEPTS

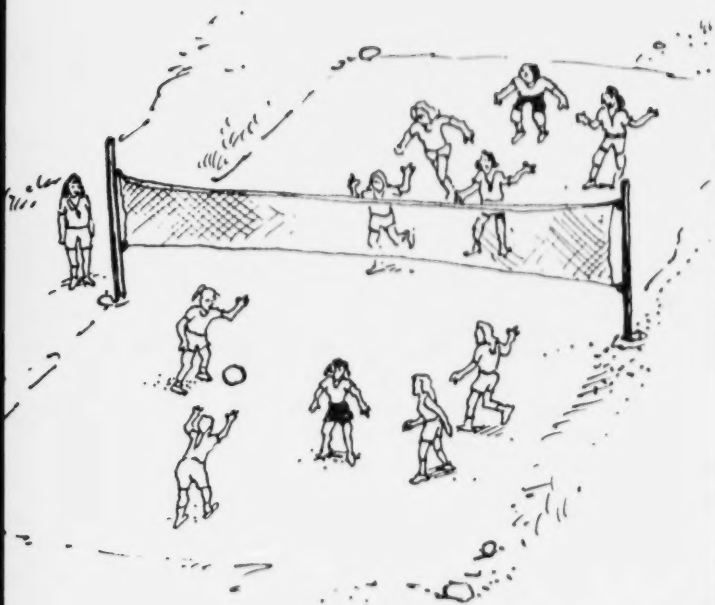
1. Each person is unique; age, racial origin, ability and interests make this a fact. Therefore the customer (participant) requires a variety of activities and quality of service for the fees they are prepared to pay.

2. Sexual stereotyping has decreased over time.

3. People with disabilities are able to participate equally in most recreational activities, although some modifications may be necessary to equipment and rules. Involvement of all members of a community in recreational pursuits has increased over time.

SUGGESTIONS FOR LEARNING ACTIVITIES

1. Select any one panel. Make a list of the skills and abilities of the participants in the illustrations. Compare your list with that of a person who selected a different panel. What are the differences in your lists?
2. List vertically down the left side of your page, all of the activities illustrated in a panel, or more than one panel. Check the activities which you have tried. In a third column indicate the activities you would like to try.
3. Make a list of activities and beside each indicate any specific clothing or equipment that is needed in order to participate. For in-depth study research the cost of such clothing and equipment.
4. Write a post card home in which you indicate to your parents your favourite activities. Select one of the panels and ensure that your comments are accurate for that decade.
5. For a selected panel, identify the activities that would be very difficult for a person requiring crutches.



6. Imagine that you are deaf. You are a camper in one of the time periods represented by a panel. Are there any activities you could not enjoy? Are there any activities that might require special leadership or equipment in order that you could safely participate? What other signals might leaders use to communicate with you?
7. Choose any panel. Imagine this setting in a different season. What activities could still be enjoyed in the new season? What activities could be played but would be dangerous? What activities could be adapted, clothing and equipment, in order that they could be played in the new season?
8. Discuss the extent to which changes in clothing for females has influenced their participation in outdoor recreation.
9. Participate in a debate in which it is resolved; that people who enjoy individual sports and activities can never be expected to enjoy a camp experience.
10. Write a children's poem about the games played in panel E.
11. In the format of a historical essay, trace the evidence of sexual stereotyping in recreational activities and leadership as illustrated in the 5 panels.

STUDENT ACTIVITY SHEET: EXPLORING ENVIRONMENTAL CHANGE

Compare the activities in each panel
under the headings indicated:

NAME _____

	ACTIVITIES FOR MALES	ACTIVITIES FOR FEMALES	CO-ED ACTIVITIES
A 1940-1950			
B 1960			
C 1970			
D 1980			
E 1986			

STUDENT ACTIVITY SHEET: EXPLORING ENVIRONMENTAL CHANGE

Evidence of changes in mechanical devices.
List devices in each panel on left and
summarize changes in the box to the right:

NAME _____

MECHANICAL DEVICES	CHANGES
A	
B	
C	
D	
E	

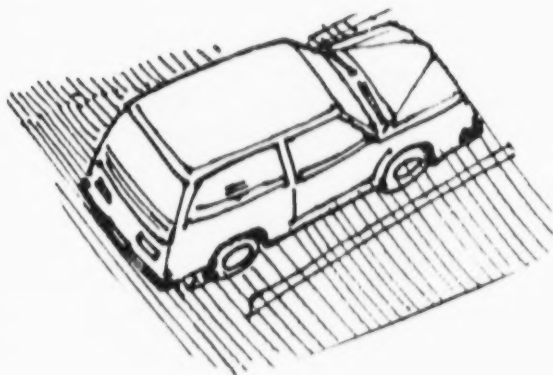
TECHNOLOGY THEME

8

The systematic advancement of science applied through industry is demonstrated in the development of the geographic area illustrated in EXPLORING ENVIRONMENTAL CHANGE.

MAJOR CONCEPTS

1. Technology has caused changes in equipment and furnishings.
2. Telecommunications bring people, activities and events together.
3. Energy sources have changed with time. Applications of power from these energy sources have become more varied.
4. Pollution follows human activity.
5. Transportation, in different forms, is a support system of communities.



SUGGESTIONS FOR LEARNING ACTIVITIES

1. List the formal and informal communication systems in each panel.
2. Examine each panel in order to identify the mechanical devices in each illustration. Make a list of the devices in each case. Now look again at the illustrations to identify how the mechanical devices have changed the activities of the people over time.
3. Invent a universal (picture) sign or symbol for each of the sources of energy in these panels. Draw these signs or symbols down the left hand side of your page. Beside each sign, make a list of the objects or items powered by each energy source.
4. Identify the methods of communication in any panel.
5. Dramatize a phone conversation between one of the camp leaders to a friend back home in the city.



6. In an emergency, for example; fire, serious fall, water accident, missing person, etc., it will be necessary to communicate the need for outside help. Dramatize a telephone call to the local fire department, hospital, ambulance service, etc.
7. What facilities are available as illustrated in the various panels, to deal with fire? Pretend you were at Camp Perspective in 1959 when the smoke house burned down. Write a story about the incident. Or, make a cassette tape with a partner in which one of you acts as the reporter from the local paper and the other partner has the role of the camp owner for an interview just after the smoke house burned down.
8. Identify all the types of pollution found from panel A to E. Suggest ways through which each type of pollution could be minimized. Prepare an editorial for the local paper expressing your views.
9. Draw a sketch, or list, the forms of transportation that appear in each panel. Your list should include ways to move both people and objects.
List the changes which have taken place that has made transportation:
 - a) faster
 - b) safer
 - c) less expensive

ADDITIONAL THEMES

Teachers/Leaders will want to develop their own themes and design appropriate learning activities for such themes.

This development of further themes will be especially appropriate in educational settings with special and/or unique emphases. The illustrations are designed for use with students who speak a language other than English. Because the illustrations represent a specific moment in time where the action is frozen, the panels adapt well for students in media arts. The media experts can move into the action presented and pursue the story, photo opportunity, news clip, etc. as outlined by the class assignment.

Other themes:

Colours

Cycles

Preservation/profit tension

Prediction of the future

Cultural differences

Cultural influences

Community values

ACKNOWLEDGEMENTS

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The Canadian Camping Association initially supported the project as a valuable learning tool and many members of the Association provided useful suggestions in the developmental stages.

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The writers welcome suggestions for additions and improvements from teachers and leaders who use Exploring Environmental Change.

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